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Job No.: CTCE/BBMP/W.No.08/KRIDL/SDBC/AGG/2014-15 28.04.2014

Aggregate Gradation Test

IS : 2386 Part I

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.
Reference	AEE/KH/436/2013-14 Dated: 25.03.2014
Sample I / D	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete (SDBC)
Date of Testing	28.04.2014

Total Weight of Sample: **5650** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	473	8.4	8.37	91.63	90-100	
4.75	2867	50.7	59.12	40.88	35-51	
2.36	724	12.8	71.93	28.07	24-39	
1.18	472	8.4	80.28	19.72	15-30	
0.3	365	6.5	86.74	13.26	9-19	
0.075	415	7.3	94.09	5.91	3-8	

Total Weight of Sample: **5575** gm

SIEVE SIZE, mm	Weight Retained, gm	% Retained	Cummulative % Retained	% Passing	Grade-II As per MORTH	Remarks
13.2	0	0.0	0	100	100	Gradation satisfies Grade-II MORTH specification
9.5	442	7.9	7.93	92.07	90-100	
4.75	2837	50.9	58.82	41.18	35-51	
2.36	763	13.7	72.50	27.50	24-39	
1.18	438	7.9	80.36	19.64	15-30	
0.3	345	6.2	86.55	13.45	9-19	
0.075	402	7.2	93.76	6.24	3-8	

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Note:

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Job No.: CTCE/BBMP/W.No.08/KRIDL/SDBC/Shape_T/2014-15 26.04.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of Work	Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.
Reference	AEE/KH/436/2013-14 Dated: 25.03.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2007)
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	26.04.2014

Result : Flakiness Index = **11.39%**

Elongation Index = **13.72%**

Result : Combined Flakiness & Elongation index **25.11%**

Comments:

→ Maximum allowable Flakiness & Elongation Index for Semi Dense Bituminous Concrete is 30%

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Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.
Reference	AEE/KH/436/2013-14 Dated: 25.03.2014
Source / Location	Hot Mix Plant, Bangalore
Type of Mix	Semi Dense Bituminous Concrete
Date of Testing	26.04.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	382	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	83	85	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	299	301	
4	Aggregate Impact value = percent fines 100* (W_2/W_1)%	21.73	22.02	21.87

Comments:

→ Maximum allowable Aggregate Impact value for Semi Dense Bituminous Concrete is 27%

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Job No.: CTCE/BBMP/W.No.08/KRIDL/WMM/S-T/2014-15 04.04.2014

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of Work	Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.
Reference	AEE/KH/436/2013-14 Dated: 25.03.2014
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	04.04.2014

Result : Flakiness Index = **12.26%**

Elongation Index = **13.45%**

Result : Combined Flakiness & Elongation index 25.71%

Comments:

→ Maximum allowable Flakinee & Elongation Index for Wet Mix Macadam is 30%

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Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.
Agency	**Technical Manager,** KRIDL, Bangalore.
Name of the Work	Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.
Reference	AEE/KH/436/2013-14 Dated: 25.03.2014
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	04.04.2014

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	380	383	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	80	83	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines	21.05	21.67	
	100* (W_2/W_1)%			21.36

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.08/KRIDL/WMM/Gradation/2014-15

04.04.2014

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.

Reference : AEE/KH/436/2013-14 Dated: 25.03.2014

Date of Testing : 04.04.2014

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **7565**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	265	265	3.5	96.5	95-100
22.4	2455	2720	36.0	64.0	60-80
11.2	1350	4070	53.8	46.2	40-60
4.75	1210	5280	69.8	30.2	25-40
2.36	800	6080	80.4	19.6	15-30
0.600	710	6790	89.8	10.2	8-22
0.075	595	7385	97.6	2.4	0-8

Note:

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3. Any Query regarding the report must be reported within 30 days from the date of testing.

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25.04.2014

TEST REPORT ON CONCRETE CUBES

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of the work : Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.

Reference : AEE/KH/436/2013-14 Dated: 25.03.2014

Sample ID : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

Grade of Concrete : M_{15}

Compressive Strength as on : 28^{th} day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	28.03.2014	25.04.2014	8.237	371.4	16.51
2	28.03.2014	25.04.2014	8.362	396.8	17.64
3	28.03.2014	25.04.2014	8.415	385.2	17.12

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Job No.: CTCE/BBMP/W.No.08/KRIDL/AGG/2013-14 : 26.03.2014

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Kodigehalli Sub Division, BBMP, Bangalore.

Agency : **Technical Manager,** KRIDL, Bangalore.

Name of Work : Improvements to roads and drains at Tatanagar in Ward No. 08, BBMP, Bangalore.

Reference : AEE/KH/436/2013-14 Dated: 25.03.2014

Date of Testing : 26.03.2014

Material : 40mm Aggregates

Total Wt. of Aggregates in gms **25200**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	978	3.88	3.88	96.12	95-100
20	15932	63.22	67.10	32.90	30-70
10	5024	19.94	87.04	12.96	10-35
4.75	2752	10.92	97.96	2.04	0-5

Note:

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3. Any Query regarding the report must be reported within 15 days from the date of testing.

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